

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the present amendment and in light of the following discussion, is respectfully requested.

Claims 7-18 are presently active in this case. The present amendment amends Claims 7 and 11 and adds Claims 13-18. Support for the present amendment can be found in the original specification, for example, at page 5, line 20 to page 9, line 3, and Figure 1. Thus, it is respectfully submitted that no new matter is added.

In the outstanding Office Action, the specification was objected to; Claim 11 was rejected under 35 U.S.C. § 102(b) as anticipated by Konrad et al. (U.S. Patent No. 6,363,731, hereinafter "Konrad"); and Claims 7-10 and 12 were rejected under 35 U.S.C. § 103(a) as unpatentable over Konrad in view of Jonquieres (U.S. Patent No. 6,128,909).

In response to the objection to the specification, the informalities noted in the outstanding Office Action are hereby corrected. Support for the amendment can be found, for example, in original Figure 1, along with the corresponding description. Thus, it is respectfully requested that the outstanding objection to the specification be withdrawn.

Turning now to the outstanding rejections of Claims 7-12 under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a), these rejections are respectfully traversed.

Claim 11 recites a method for electricity generation on board a motor vehicle, equipped with a fuel cell stack, method comprising, *inter alia*, "compressing the residual gases by the compressor such that a dew point temperature of a water vapor is higher than a temperature of a condenser" and "liquefying the water vapor discharged from the compressor by the condenser disposed directly downstream from the condenser." As stated in the originally filed specification at page 3, in the compressor the cathode evacuation gases are compressed to a pressure of 4 bar, for example, such that the dew point temperature of the water vapor is higher than the temperature of the condenser. After compression, the cathode

evacuation gases are injected into a condenser maintained at a temperature below the dew point temperature of water, so that the water contained in the cathode evacuation gases is completely liquefied. Additionally, in an exemplary embodiment, the turbine and the compressor are situated close to the condenser so that the cathode evacuation gases arriving at the turbine suffer only a small pressure loss. Thus, the cathode evacuation gases are capable of supplying a non-negligible portion of energy for driving the compressor.

Turning now to the cited references, Konrad describes a system for extracting a liquid from a gas stream. The outstanding Office Action, in section 5 on page 3, concedes that Konrad fails to disclose that the exhaust gas/residual gas from the fuel cell stack first enters the compressor, then a condenser and finally a turbine before leaving the system. Thus, it is respectfully submitted that Konrad does not teach or suggest “liquefying the water vapor discharged from the compressor by the condenser disposed directly downstream from the condenser,” as recited in amended Claim 11. Therefore, it is respectfully requested that the outstanding rejection of Claims 11 as anticipated by Konrad be withdrawn.

The outstanding Office Action relies on Jonquieres as disclosing “a water/liquid removal system in which air (11) entering the system goes to a set of compressors (16a, b), then a condenser (23) via heat exchangers (23a, b and 13), and turbines “26, 32, to remove the water from the air.”¹

However, it is respectfully submitted that Jonquieres does not teach or suggest “a compressor interposed directly upstream from the condenser such that the residual gases are transferred from the compressor to the condenser,” as recited in amended Claim 7.

Instead, as shown in Figure 1 of Jonquieres, the bleed air 11, after passing through compressor 16b must travel to a secondary heat exchanger 13, then through a split duct 30, and then through a reheater 19, before reaching a condenser 23. Thus, the compressor 16b

¹ See the outstanding Office Action, at section 5 on page 3.

described in Jonquieres is not interposed directly upstream from the condenser 23 such that the bleed air 11 is transferred directly from the compressor 16b to the condenser 23.

Additionally, the outstanding Office Action states that “[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to replace the order of the compressor and turbine of Jonquieres in the system of Konrad for a more efficient system.”² However, Konrad explicitly describes cooling the cathode exhaust 4 immediately after leaving the cathode chamber 3. For example, Konrad, at column 3, lines 26-31 states that the gas stream is expanded to pressure below the ambient pressure around the apparatus so that the gas stream containing water or steam is *greatly cooled* so that the condensation of at least a portion of the water stream contained in the gas stream occurs. Konrad teaches this cooling is achieved by *reducing pressure*. Konrad also teaches inserting a heat transfer device 12 and heat exchangers 14 upstream of the compressor unit 8 to further cool the gas stream.³ For example, Konrad, at column 4, lines 6-17, recites that the cathode exhaust flowing from the cathode chamber is cooled by the thermal transfer device 12 before reaching the turbine unit 7 so that a removal of water by condensation occurs already at this point. Thus, Konrad explicitly describes that the gas exhaust stream from the cathode chamber 3 should be expanded and the temperature of the exhaust gas lowered upon exiting the cathode chamber 3. Additionally, Konrad states that the cooling water or air from the heat exchangers 13 and 14 and the turbine unit 7 can be utilized for additional applications within a fuel cell system or within a gas generating system.⁴

Therefore, modifying Konrad with the teachings of Jonquieres would render the device described in Konrad unsatisfactory for its intended purpose in violation of M.P.E.P.

§ 2143.01(V). Thus, it is respectfully submitted that there is no suggestion or motivation to

² See the outstanding Office Action, at section 5 on page 3.

³ See Konrad, at Figure 2 along with the corresponding description.

⁴ See Konrad, at column 4, lines 46-57.

replace the order of the compressor and turbine of Jonqueres in a system of Konrad as suggested by the outstanding Office Action.

Additionally, it is respectfully submitted that neither Konrad nor Jonqueres teaches or suggests that "the compressor compresses the residual gases such that a dew point temperature of the water vapor is higher than a temperature of the condenser," as recited in amended Claims 7 and 11. Furthermore, the outstanding Office Action does not address this limitation.

Therefore, it is respectfully submitted that, even assuming the combination of Konrad and Jonqueres is proper, neither of the cited references teach or suggest every feature recited in amended Claim 7. Thus, it is respectfully requested that the outstanding rejection of Claims 7-10 and 12 as unpatentable over Konrad in view of Jonqueres be withdrawn.

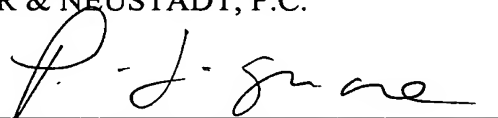
New Claims 13-15 depend from Claim 7 and new Claims 16-18 depend from Claim 11. Therefore, it is respectfully submitted that new Claims 13-18 are patentable for at least the reasons discussed above.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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